Form PTO-1449

Applicant: Jeffrey D. Walker

Serial No.:

10/017,358

Filing Date: December 13, 2001

For: OPTICAL TRANSMITTER INCLUDING A LINEAR SEMICONDUCTOR OPTICAL

AMPLIFIER

Sheet 1 of 4
Confirmation No.: 6851
Att'y Docket No.: 15436.247.45.1.1
Group: 2633

SUPPLEMENTAL INFORMATION DISCLOSURE CITATIONS MADE BY APPLICANT

U.S. Patent Documents

Examiner	Document	Issue	<u>Name</u>		
<u>Initial*</u>	<u>Number</u>	<u>Date</u>			
D4 1	4,794,346	12/27/1988	Miller		
2	5,299,054	03/29/1994	Geiger		
3	5,305,412	04/19/1994	Paoli		
4	5,604,628	02/18/1997	Parker et al.		
5	5,654,822 B1	08/05/1997	Ducellier et al.		
6	5,673,141 B1	09/30/1997	Gambini		
7	5,748,653	05/05/1998	Parker et al.		
8	5,754,571	05/19/1998	Endoh et al.		
9	5,771,320	06/23/1998	Stone		
10	5,778,132	07/07/1998	Csipkes et al.		
11	5,805,322	09/08/1998	Tomofuji		
12	5,999,293	12/07/1999	Manning		
13	6,061,156	05/09/2000	Takeshita et al.		
14	6,128,115	10/03/2000	Shiragaki et al.		
15	6,215,583 B1	11/13/2001	Chen et al.		
16	6,317,531 B1	04/10/2001	Lagerstrom et al.		
17	6,333,799 B1	12/25/2001	Bala et al.		
18	6,335,992 B1	01/01/2002	Bala et al.		
19	6,347,104 B1	02/12/2002	Dijaili et al.		
20	6,462,865 B1	10/08/2002	Chu et al.		

Examiner: D. Pur

Date Considered: 3/4/05

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 2 of 4 Form PTO-1449 Confirmation No.: 6851 Jeffrey D. Walker Applicant: Att'v Docket No.: 15436.247.45.1.1 Serial No.: 10/017,358 Group: 2633 December 13, 2001 Filing Date: UDING A LINEAR SEMICONDUCTOR OPTICAL OPTICAL TRANSMIT For: **AMPLIFIER** Chu et al. 02/18/2003 6,522,462 B2 Dijaili et al. 22 06/10/2003 6,577,654 B1 Dijaili et al. 23 6,707,600 B1 03/16/2004 Islam et al. 24 6,714,344 B2 03/30/2004 01/03/2002 Song 25 2002/0001112 Foreign Patent Documents Country or **Publication** Examiner Document Patent Office Translation Initial* Number Date No 01/14/2000 Japan 02000012978A Other Documents (including author, title, pertinent pages, etc.) Examiner Initial* S. Diez et al., All-Optical Switch for TDM and WDM/TDM Systems Demonstrated in a 640 Gbit/s Demultiplexing Experiment, Electronics Letters, Vol. 34, No. 8, pp. 803-805, April 16, 1988. S. Diez et al., Gain-Transparent SOA-Switch for High-Bitrate OTDM Add/Drop Multiplexing, 28 IEEE Photonic Technology Letters, Vol. 11, No. 1, pp. 60-62, January 1999. S. Diez et al., Novel Gain-Transparent SOA-Switch for High Bitrate ODTM Add/Drop 29 Multiplexing, ECOC 1998, Vol. 1, pp. 461-462, September 1998. B. Femier et al., Fast (3000 ps) Polarization Insensitive Semiconductor Optical Amplifier Switch 30 with Low Driving Current (70 mA), Semiconductor Laser Conference, Conference Digest, 14th IEEE International, pp. 130-131, September 21-15, 1992. J.E. Fouquet et al., Compact, Scalable Fiber Optic Cross-Connect Switches, IEEE, 1999 Digest 31 of the LEOS Summer Topical Meetings, pp. 59-60, 1999.

Examiner: Date Considered: 3/4/05

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-14	Sheet 3 of 4
Applicant:	Jeffrey D. Walker Confirmation No.: 6851
Serial No.:	10/017,358 Att'y Docket No.: 15436.247.45.1.1
Filing Date:	December 13, 2001 Group: 2633
For:	OPTICAL TRANSMITTER INCLUDING A LINEAR SEMICONDUCTOR OPTICAL AMPLIFIER
BUP 32	M.M. Ibrahim, <i>Photonic Switch Using Surface-Emitting Laser Diode and AOD</i> , 16 th National Radio Science Conference, NRSC 1999, pp. 1-8, Ain Shams University, Cairo, Egypt, February 23-25, 1999.
33	J. Mork et al., Semiconductor Devices for All-Optical Signal Processing: Just How Fast Can They Go?, IEEE Lasers and Electro-Optics Society 1999 12 th Annual Meeting, LEOS 1999, Vol. 2, pp. 900-901, November 8-11, 1999.
34	K. Panajotov et al., <i>Polarisation Switching in Proton-Implanted VCSELs</i> , 1999 Digest of the LEOS Summer Topical Meetings, pp. 55-56, July 26-30, 1999.
35	B.C. Qui et al., Monolithically Integrated Fabrication of 2x2 and 4x4 Crosspoint Switches Using Quantum Well Intermixing, 2000 International Conference on Indium Phosphide and Related Materials, Conference Proceedings, pp. 415-418, May 14-18, 2000.
36	J. Scheuer et al., Nonlinear On-Switching of High Spatial Frequency Patterns in Ring Vertical Cavity Surface Emitting Lasers, 1999 IEEE LEOS Annual Meeting Conference Proceedings, 12 th Annual Meeting, IEEE Lasers and Electro-Optics Society 1999 Annual Meeting, Vol. 1, pp. 123-124, November 8-9, 1999.
37	H. Soto et al., All-Optical Switch Demonstration Using a Birefringence Effect in a Semiconductor Optical Amplifier, IEEE CLEO, Pacific rim 1999, pp. 886-889, 1999.
38	N. Yoshimoto et al., Spot-Size Converted Polarization-Insensitive SOA Gate with a Vertical Tapered Submicrometer Stripe Structure, IEEE Photonics Technology Letters, Vol. 10, No. 4, pp. 510-512, April 4, 1998.
39	Wolfson et al., Detailed Theoretical Investigation of the Input Power Dynamic Range for Gain-Clamped Semiconductor Optical Amplifier Gates at 10 Gb/s, IEEE Photonics Technology Letters, 1998, Vol. 10, No. 9, pp. 1241-1243.
40	F. Robert et al., All-Optical Set-Rest Operation of a Bistable Semiconductor Laser Intracavity-Coupled to a Vertical-Cavity Surface-Emitting Laser, IEEE Photonic Technology, Letters, Vol. 12, No. 5, May 2000, pp. 465-467.
41	D.B. Shire et al., Gain Controlled Vertical Cavity Surface Emitting Lasers Coupled with Intracavity In-plane Lasers, Appl. Phys. Lett. Vol. 66, No. 14, April 3, 1995, pp. 1717-1719.

Date Considered: 3/4/05 *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner:

Form PTO-1449

Applicant: Jeffrey D. Walker

Serial No .:

10/017,358

Filing Date: December 13, 2001

For:

Group: 2633

OPTICAL TRANSMITTER INCLUDING A LINEAR SEMICONDUCTOR OPTICAL **AMPLIFIER**

Sheet 4 of 4

Confirmation No.: 6851

Att'y Docket No.: 15436.247.45.1.1

References Cited by Applicants

While the filing of Information Disclosure Statements is voluntary, the procedure is governed by the guidelines of Section 609 of the Manual of Patent Examining Procedure and 37 C.F.R. §§ 1.97 and 1.98. To be considered a proper Information Disclosure Statement, Form PTO-1449 shall be accompanied by a copy of each listed patent or publication or other item of information and a translation of the pertinent portions of foreign documents (if an existing translation is readily available to the applicant), an explanation of relevance of each reference not in the English language, and should be submitted in a timely manner as set out in MPEP Sec. 609.

Examiners will consider all citations submitted in conformance with 37 C.F.R. § 1.98 and MPEP Sec. 609 and place their initials adjacent the citations in the spaces provided on this form. Examiners will also initial citations not in conformance with the guidelines which may have been considered. A reference may be considered by the Examiner for any reason whether or not the citation is in full conformance with the guidelines. A line will be drawn through a citation if it is not in conformance with the guidelines AND has not been considered. A copy of the submitted form, as reviewed by the Examiner, will be returned to the applicant with the next communication. The original of the form will be entered into the application file.

Each citation initialed by the Examiner will be printed on the issued patent in the same manner as references cited by the Examiner on Form PTO-892.

The reference designations "A1," "A2," etc. (referring to Applicant's reference 1, Applicant's reference 2, etc.) will be used by the Examiner in the same manner as Examiner's reference designations "A," "B," "C," etc. on Office Action Form PTO-1142.

W:\15436\247.45.1.1\DFW0000012531V001.doc

Examiner:	Date Considered:	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609, draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.





Sheet 1 of 3

FORM PTO-1449 (REV. 6-89)

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

Serial No. Attorney's Docket No. 21153-05929 Applicant

Jeffrey D. Walker

10/017,358

DISCLOSURE CITATION

(Use several sheets if necessary)

Filing Date

Group Art Unit

(USB Several streets it necessary)			December 13,	2001	2633				
			U.S. PA	TENT DOCUMENTS					
Examiner initial		Document Number Date		Name	Class	Subclass	Filing Date if Appropriate		
Dep	3,467,906 09/16/69 Cornely e		Cornely et al.	330	4.3				
		3,828,231	08/06/74 Yamamoto		357	30			
		4,794,346	12/27/88	Miller	330	4.3			
		5,436,759	7/25/95	Dijaili et al.	359	333			
		5,949,807	09/07/1999	Fujimoto et al.	372	45 R I	CEIVE		
		5,960,024	09/28/1999	Li et al.	372	96 ⁻ J(JL 1 5 2002		
		6,044,100	03/28/2000	Hobson et al.	372	7 2 ehno	logy Center 26		
7		6,115,517	09-05-00	Shiragaki et al.	385	24			
		<u> </u>	FOREIGN	PATENT DOCUMENTS					
		Document Number	Date	Country	Class	Subclass	Translation Yes No		
Dep		JP 01129483	11/14/87	Japan	H01S	3/18	No		
		JP 10190147	07/21/98	Japan	H01S	3/18	No No		
1	-	JP 56006492	01/23/81	Japan	H01S	3/18			
		OTHER DOC	UMENTS (ncluding Author, Title, Date, Pertine	nt Pages, Etc	c.)			
DCD	Α	for Immediate Public	ation, OFC '98	es a Gain-Clamped Semiconduc 3, San Jose (Feb. 1998), 1 unnur	nbered pag	е.			
	В	Bauer, B. et al., "Gain Stabilization of a Semiconductor Optical Amplifier by Distributed Feedback," IEEE Photonics Technology Letters, Vol. 6, No. 2 (Feb. 1994), pages 182-185.							
	С	Dorgeuille, F., et al., "1.28 Tbit/s Throughput 8x8 Optical Switch Based on Arrays of Gain-Clamped Semiconductor Optical Amplifier Gates," Optical Fiber Communication Conference, Vol. 4, Pages 221-223, March 2000.							
	D	Dorgeuille, F., et al., H., "Fast Optical Amplifier Gate Array for WDM Routing and Switching Applications," OFC '98 Technical Digest, Pages 42-44, 1998.							
	E	Doussiere, P. et al., "Clamped Gain Travelling Wave Semiconductor Optical Amplifier for Wavelength Division Multiplexing Applications," Maui, Hawaii, Sept. 19-23, 1994, New York, IEEE, US, Vol. Conf. 14 (9/14/94), pages 185-186.							
\bigvee	F	Evankow, Jr., J.D., e	t al., "Photonic	C Switching Modules Designed w munications, Vol. 6, No. 7, Page PATE CONSIDERED					
XAMINER	اح ا	. //		D. TT. 001/0/05050					

EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered.

PTO-1449 REV: 02/01

Include copy of this form with next communication to applicant.



	10,	راه 📉						Snee	t 2 of 3	
FORM PTO-1449 (REV. 6-89)	9 PANAKOFICE	DEPARTMENT OF COMMERCE Patent and Trademark Office			Attorney's Docket No. 21153-05929			Serial No. 10/017,358		
INFO	RMATION DISCLOSE	URE CITA	TION	Applicant Jeffrey D.		effrey D. V	. Walker			
	(Use several sheets if nece	essary)		Filing Date December 13, 2001			Group Art Unit Not yet known)	
		U.S. PA	TENT DOC	UMENTS						
Examiner initial	Document Number	Date		Name		Class	Subclass	Filing Da		
					REC	EIVE				
	-	OREIGN	PATENT D	DCUMENT	rs					
	Document Number	Date		Country	JUL :	. 5 .,20 02	Subclass	Transla	tion	
		<u> </u>					<u> </u>	Yes	No	
				16	cnnolog	Center 2	600			
	OTHER DOCL	JMENTS (I	Including Author	, Title, Date, I	Pertinent f	Pages, Etc	i.)			
Deal	Gee, S. et al., "High-Posemiconductor Optica 2, March/April 1998, p.	ower Mode-I I Amplifiers,' ages 209-21	Locked Externation " IEEE Journalies."	al Cavity Ser of Selected	miconduc Topics in	tor Laser Quantur	Using Inv n Electron	ics, Vol. 4	4, No.	
	H Jeong, G., et al., "Gair	•				ctor Optic	cal Amplifi	iers," Jou	mal	
 	of Lightwave Technolo					· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		0:00	
	Masked Substrates," /	EEE Photon	oics Technolo	gy Letters, V	ol. 4, No.	. 9 (Sept.	1992), pp	<u>. 1006-10</u>	009.	
J	Applications," IEEE Jo	urnal of Qua	antum Electron	ics, Vol. 35,	No. 7, Pa	ages 1067	7-1074, Ju	ily 1999.	Gate	
K	Monolithically Integrate	Koyama, F., et al., "Multiple-Quantum-Well GalnAs/GalnAsP Tapered Broad-Area Amplifiers with Monolithically Integrated Waveguide Lens for High-Power Applications," IEEE Photonics Technology Letters (August 1993), Vol. 5, No. 8, pages 916-919.								
L	Leuthold, J., et al., "All Journal of Quantum E	•			•	•	xtinction	Ratios," I	EEE	
N	McAdams, L.R. et al.,	"Linearizing	High Performa	nce Semico	nductor (mplifiers: 7	Fechnique	es	
, I	Mutalik, V.G. et al., "A	and Performance," LEOS Presentation (1996), pages 363-364. Mutalik, V.G. et al., "Analog performance of 1310-nm gain-clamped semiconductor optical amplifiers," OEC 277 Technical Pirest Thursday Marriag 14145 AM pages 366-367.								
	Simon, J.C. et al., "Tra	OFC '97 Technical Digest, Thursday Morning, 11:15 AM, pages 266-267. Simon, J.C. et al., "Travelling wave semiconductor optical amplifier with reduced nonlinear distortions," Electronics Letters, Vol. 30, No. 1 (Jan 6, 1994), pages 49-50.								
F	P Soulage, G. et al., "Cla Dynamic Range Optic	Soulage, G. et al., "Clamped Gain Travelling Wave Semiconductor Optical Amplifier as a Large Dynamic Range Optical Gate," Alcatel Alsthom Recherche, route de Nozay, 91460 Marcoussis, France undated, 4 unnumbered pages.						rance,		
	Tai, C., et al., "Dynami Based on Low-Gain So No. 4, Pages 525-533	emiconducto	or Optical Amp							
F										
EXAMINER 2). Rup.		DATE C	ONSIDERED	3/4/0	,5			-	
	references considered, whether or no rm with next communication to applic		formance with MPEP	§ 609; Draw line	through citat	ion if not in co	onformance an	nd not conside	ared.	

PTO-1449 REV: 02/01





Sheet 3 of 3

Serial No. DEPARTMENT OF COMMERCE **FORM PTO-1449** Attorney's Docket No. 10/017,358 21153-05929 89)
INFORMATION DISCLOSURE CITATION (REV. 6-89) Applicant Jeffrey D. Walker Group Art Unit Filing Date (Use several sheets if necessary) Not yet known December 13, 2001 **U.S. PATENT DOCUMENTS** Subclass Filing Date If **Document Number** Name Examiner initial Appropriate Technology Center 2600 FOREIGN PATENT DOCUMENTS Class Subclass **Translation** Country **Document Number** No OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Tiemeijer, L.F. et al., "High-Gain 1310 nm Semiconductor Optical Amplifier Modules with a Built-in Des Amplified Signal Monitor for Optical Gain Control," IEEE Photonics Technology Letters, Vol. 9, No. 3 (March 1997), pages 309-311. Tiemeijer, L.F. et al., "Reduced Intermodulation Distortion in 1300 nm Gain-Clamped MQW Laser Amplifiers," IEEE Photonics Technology Letters, Vol. 7, No. 3 (March 1995), pages 284-286. Toptchiyski, G., et al., "Time-Domain Modeling of Semiconductor Optical Amplifiers for OTDM Applications," IEEE Journal of Lightwave Technology, Vol. 17, No. 12, Pages 2577-2583, December 1999. van Roijen, R., et al.., "Over 15 dB Gain from a Monolithically Integrated Optical Switch with an Amplifier," IEEE Photonics Technology Letters, Vol. 5, No. 5, Pages 529-531, May 1993. Walker, J.D. et al., "A Gain-Clamped, Crosstalk Free, Vertical Cavity Lasing Semiconductor Optical Amplifier for WDM Applications," summaries of the papers presented at the topical meeting, Integrated Photonics Search; 1996 Technical Digest Series; Proceedings of Integrated Photonics; Boston, MA, USA, 29.04-02.05 1996, Vol. 6, 1996, pages 474-477. Agility Unveils Long-Haul Laser, Light Reading - The Global Site for Optical Networking, retrieved from Internet www.lightreading.com/document.asp (3/30/01) EXAMINER EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. nclude copy of this form with next communication to applicant.